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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,022

Applicant(s)

PING ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

SECOND OFFICE ACTION

Amendments

1. The amendment and response received September 28, 2005 has been entered and considered. Claims 1-16 are pending in this application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2, 3, 8, 9, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 2, 3, 8, 9, 12 and 13 use the term "comprises" to describe the composition of the second member although the claims upon which they depend use "consisting essentially of". Dependent claims must further limit the claims upon which they depend (i.e. they cannot broaden the limitations of the claims upon which they depend).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Brasse (U.S. Patent 3,732,083).

7. Brasse discloses an aluminum strip containing 4 % silicon roll bonded to a steel strip (e.g. see Example in column 5). Although Brasse may not disclose that the composite strip can be used as a "transition insert" as recited in applicant's preamble, the strip of Brasse would certainly be capable of such a use since it has all the structure required of such an insert. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). See MPEP 2111.02. In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

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8. Claims 1-3 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Slater (U.S. Patent 3,300,838).

9. Slater discloses an aluminum strip containing 2-8 % silicon roll bonded to a steel strip (e.g. see claim 1). The endpoints of Slater's aluminum alloy silicon content fall directly in applicant's claimed ranges. Although Slater may not disclose that the composite strip can be used as a "transition insert" as recited in applicant's preamble, the strip of Slater would certainly be capable of such a use since it has all the structure required of such an insert. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). See MPEP 2111.02. In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

10. Claims 1-4, 6, 11-14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Lynch (U.S. Patent 2,539,248).

11. Lynch discloses an aluminum strip containing 2.5 % silicon and 4% silicon roll bonded to a steel strip and having a silver intermediate layer of a thickness between 0.000025" to 0.001"

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(e.g. see claims 5-7). Although Lynch may not disclose that the composite strip can be used as a "transition insert" as recited in applicant's preamble, the strip of Lynch would certainly be capable of such a use since it has all the structure required of such an insert. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). See MPEP 2111.02. In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

12. Claims 1-4 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ramos (WO 96/11800).

13. Ramos discloses an aluminum strip containing 1-6 % silicon roll bonded to a steel strip (e.g. see claims 1-7). A nickel interlayer may be used (e.g. see Figure 1; page 3, lines 22-27). Although Ramos may not disclose that the composite strip can be used as a "transition insert" as recited in applicant's preamble, the strip of Ramos would certainly be capable of such a use since it has all the structure required of such an insert. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). See MPEP 2111.02. In any

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event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The range of silicon in the applicant's claims is disclosed with sufficient specificity to anticipate the claims since the upper endpoint of the silicon range of Ramos falls directly within applicants' broad silicon range. In addition the narrower ranges of silicon in the applicant's dependent claims (e.g. claims 2 and 3) are entirely encompassed by the silicon range of Ramos and the silicon range of Ramos is small enough that each of the points 2%, 3% and 5% can be easily envisaged by one of ordinary skill in the art. See MPEP 2131.03.

14. Claims 1-4 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Wyatt (U.S. Patent 2,747,256).

15. Wyatt discloses an aluminum strip containing up to 4 % silicon roll bonded to a steel strip (e.g. see column 1, lines 48-56; claims 1-2). A nickel interlayer may be used (e.g. see column 2, lines 3-6). Although Wyatt may not disclose that the composite strip can be used as a "transition insert" as recited in applicant's preamble, the strip of Wyatt would certainly be capable of such a use since it has all the structure required of such an insert. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). See MPEP 2111.02.

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In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The range of silicon in the applicant's claims is disclosed with sufficient specificity to anticipate the claims since the upper endpoint of the silicon range of Wyatt falls directly within applicants' broad silicon range. In addition the narrower ranges of silicon in the applicant's dependent claims (e.g. claims 2 and 3) are entirely encompassed by the silicon range of Wyatt and the silicon range of Wyatt is small enough that each of the points 2% and 3% can be easily envisaged by one of ordinary skill in the art. See MPEP 2131.03.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 6 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Ramos (WO 96/11800).

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18. Ramos is discussed in detail above. Ramos may differ from claims 6 and 16 in that Ramos may not disclose the thickness of the nickel interlayer used between the aluminum and steel members. It would have been obvious to one of ordinary skill in the art at the time the invention was made, however, to optimize the thickness of the nickel interlayer of Ramos to obtain best adhesion between the aluminum and steel members of Ramos because that is the purpose of the nickel layer.

19. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch (U.S. Patent 2,539,248) in view of Szecket (U.S. Patent 4,842,182).

20. Lynch discloses an aluminum strip containing 2.5 % silicon and 4% silicon roll bonded to a steel strip and having a silver intermediate layer of a thickness between 0.000025" to 0.001" (e.g. see claims 5-7). Although Lynch may not disclose that the composite strip can be used as a "transition insert" as recited in applicant's preamble, the strip of Lynch would certainly be capable of such a use since it has all the structure required of such an insert. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). See MPEP 2111.02. In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA

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1951). Lynch may differ from some of the claims in that Lynch may use a silver interlayer instead of a chromium interlayer between the aluminum member and the steel member. Szecket, however, discloses that it is known in the prior art that either silver or chromium interlayers can be used between metallurgically bonded aluminum and steel composites in order to prevent the formation of brittle intermetallics that inhibit good metallurgical bonding, (see column 2, lines 56-68). In view of Szecket, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use either silver interlayers or chromium interlayers for the interlayers of Lynch because Szecket discloses that chromium interlayers are understood in the prior art to provide good metallurgical bonding as an alternative to silver interlayers.

Response to Arguments

21. Applicant's arguments filed September 28, 2005 have been fully considered but they are not persuasive.

22. Regarding the applicant's insertion of "consisting essentially of" into the claims (e.g. see claim 1, line 3; claim 7, line 3; claim 11, line 5), while applicant points out additional constituents that may be found in the compositions of the applied prior art references and asserts that the compositions may affect the properties of "electrical conductivity and weldability of the second member, resistance to cracking, and a relatively high melting point of the second member", applicant has failed to show that the specific additional constituents of the references (in the amounts disclosed by the references) actually do affect the material and basic and novel characteristics of the invention. Burden of proof is on applicant when asserting that additional

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constituents affect the basic and novel characteristics of the invention. Barring such evidence, the phrase "consisting essentially of" has no more limiting effect than the phrase "comprising" unless it is shown that the additional constituents affect the basic and novel characteristics of the applicant's invention. In any event, a review of applicant's disclosure shows that transition inserts are actually used for a variety of applications and there is no clear intent in the specification to limit the compositions of the invention to those of any particular electrical conductivity. Nor is there any indication in the disclosure as to how much of any particular alloying constituent would be allowed before it would be considered to affect the novel and characteristics of the applicant's invention. For applicant's convenience, the relevant portions of MPEP 2111.03 on interpretation of the transitional phrase "consisting essentially of" are reproduced as follows:

The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original) (Prior art hydraulic fluid required a dispersant which appellants argued was excluded from claims limited to a functional fluid "consisting essentially of" certain components. In finding the claims did not exclude the prior art dispersant, the court noted that appellants' specification indicated the claimed composition can contain any well-known additive such as a dispersant, and there was no evidence that the presence of a dispersant would materially affect the basic and novel characteristic of the claimed invention. The prior art composition had the same basic and novel characteristic (increased oxidation resistance) as well as additional enhanced detergent and dispersant characteristics.). "A consisting essentially of" claim occupies a middle ground between closed claims that are

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written in a consisting of' format and fully open claims that are drafted in a comprising' format." *PPG Industries v. Guardian Industries*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). See also *Atlas Powder v. E.I. duPont de Nemours & Co.*, 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); *In re Janakirama-Rao*, 317 F.2d 951, 137 USPQ 893 (CCPA 1963); *Water Technologies Corp. vs. Calco, Ltd.*, 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of' for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). See also *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1240-41, 68 USPQ2d 1280, 1283-84 (Fed. Cir. 2003) (Applicant's statement in the specification that "silicon contents in the coating metal should not exceed about 0.5% by weight" along with a discussion of the deleterious effects of silicon provided basis to conclude that silicon in excess of 0.5% by weight would materially alter the basic and novel properties of the invention. Thus, "consisting essentially of" as recited in the preamble was interpreted to permit no more than 0.5% by weight of silicon in the aluminum coating.); *In re Janakirama-Rao*, 317 F.2d 951, 954, 137 USPQ 893, 895-96 (CCPA 1963). If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See also *Ex parte Hoffman*, 12 USPQ2d 1061, 1063-64 (Bd. Pat. App. & Inter. 1989) ("Although consisting essentially of' is typically used and defined in the context of compositions of matter, we find nothing intrinsically wrong with the use of such language as a

modifier of method steps. . . [rendering] the claim open only for the inclusion of steps which do not materially affect the basic and novel characteristics of the claimed method. To determine the steps included versus excluded the claim must be read in light of the specification. . . . [I]t is an applicant's burden to establish that a step practiced in a prior art method is excluded from his claims by consisting essentially of language.").

23. Applicant also argues that some of the applied prior art is directed to bearing compositions and that the considerations for producing bearings are "considerably different than the considerations for producing transition inserts". It is noted, however, that the recitations of "transition insert" in applicant's preambles do not add any structure that would not be found in the articles of the applied prior. All the articles of the applied art would certainly be capable of the recited use since they all have compositions and structures that would be required of a transition insert. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). See MPEP 2111.02.


Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
October 11, 2005